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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/802,213	03/17/2004	Steven F. Livengood	A2507-US-NP	3559

75931 7590 12/26/2008
BASCH & NICKERSON LLP
1777 PENFIELD ROAD
PENFIELD, NY 14526

EXAMINER

CRUZ, IRIANA

ART UNIT	PAPER NUMBER
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2625

NOTIFICATION DATE	DELIVERY MODE
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12/26/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

dmasters@bnpatentlaw.com
dneels@bnpatentlaw.com
mnickerson@bnpatentlaw.com

Office Action Summary	Application No.	Applicant(s)	
	10/802,213	LIVENGOOD ET AL.	
	Examiner	Art Unit	
	IRIANA CRUZ	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 September 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>03/17/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 19 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1-13, 15 and 17-19** are rejected under 35 U.S.C. 103(a) as being unpatentable over Herron (US Publication Number 2005/0157921 A1) in view of Tagami et al. (US Patent Number 5,237,425).

Regarding **Claim 1**, Herron'921 shows a method for converting input data representing a color formed from only two colors to output data representing a color in a full color space defined relative to at least three colors (**i.e., a method for converting from a duotone/highlight-color to a full CMYK/color space value, use a full color printer to be able to print what a highlight printer would using at least four colors to represent the two-color original data. See Paragraphs 7-13**), comprising: receiving the two-color input data in the form of two colors, a primary color and a secondary color (**i.e., two colors a primary and secondary color are given in duotone color input ((duotone refers to two colors, a color and black)). See Paragraphs 2 and 7-13**); mapping each color of the two-color input data to an

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equivalent color defined in the full color space by applying a first mapping function to each color of the two-color input data **(i.e., mapping duotone colors to CMYK/full-color values in color space. See Paragraphs 7-13 and 20-23).**

Herron'921 fails to specifically show a method comprising determining, from the two-color input data, a rendering characteristic for each of the primary color and the secondary color; based upon the rendering characteristics, and the primary and secondary colors, representing a combination of the primary and secondary colors, and the associated rendering characteristics, as an intermediate output; and processing the intermediate output using a second function to generate the output data representing a single color defined in the full color space.

Tagami'425 teaches a method comprising determining, from the two-color input data, a rendering characteristic for each of the primary color and the secondary color **(i.e., a two color input data from like the ones needed in highlight printers ((duotone)) need a Ink source Language where the user defines his colors ((like for example the duotone colors)) and the output is define by the colors and screens/rendering-characteristic. See Column 1, Lines 16-35 and 39-55, See Column 3, Lines 15-27 and 55-66);** based upon the rendering characteristics, and the primary and secondary colors, representing a combination of the primary and secondary colors, and the associated rendering characteristics, as an intermediate output **(i.e., the screen set definition ((SCNSET)) represents the intermediate value where the two colors are shown with screen values. See Column 5, Lines 3-23 and 33-42, See Column 6, Lines 29-67 and See Column 7, Lines 1-42 and See Column 8, Lines 36-**

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67 and See Column 12, Lines 12-55 and See Column 15, Lines 60-67); and processing the intermediate output using a second function to generate the output data representing a single color defined in the full color space **(i.e., with the two colors and the screen directory full color space can be used to define the desired color. See Column 7, Lines 43-67, See Column 9, Lines 39-67, See Column 14, Lines 15-43).**

Having the system of Herron'921 and then given the well-established teaching of the Tagami'425, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the system as suggested by the combination of Herron'921 with the teachings of Tagami'425 by adding determining, from the two-color input data, a rendering characteristic for each of the primary color and the secondary color; based upon the rendering characteristics, and the primary and secondary colors, representing a combination of the primary and secondary colors, and the associated rendering characteristics, as an intermediate output; and processing the intermediate output using a second function to generate the output data representing a single color defined in the full color space, in order to make the system a more user friendly one where the user has the option of defining his colors and creating specific inks and let the user define, palettes, colors, patterns and screens.

Regarding **Claim 2**, Herron'921 shows a method wherein the first function is user-defined **(i.e., the user selects the highlights conversion. See Paragraphs 19-23).**

Regarding **Claim 3**, Herron'921 shows a method wherein the user-defined function is a user-defined map from a highlight-color space to full-color space **(i.e., the**

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user selects the highlights conversion duotone that will be converted to device independent color space to use the full color space to represent it. See Paragraphs 7-10 and 18-23).

Regarding **Claim 4**, the combination of Herron'921 and Tagami'425 shows a method wherein the step of representing a combination of the primary and secondary colors, and the associated rendering characteristics, as an intermediate output includes converting the secondary color into an HSV representation and applying the percentage of highlight to the HSV representation (**i.e., the screen set definition ((SCNSET)) represents the intermediate value where the two colors are shown with screen values; highlight percentage is applied. See Column 5, Lines 3-23 and 33-42, See Column 6, Lines 29-67 and See Column 7, Lines 1-42 and See Column 8, Lines 36-67 and See Column 12, Lines 12-55 and See Column 15, Lines 60-67 in reference Tagami'425).**

Regarding **Claim 5**, the combination of Herron'921 and Tagami'425 shows a method wherein the step of processing the intermediate output using a second function to generate the output data representing a single color defined in the full color space, includes applying a percentage black to the intermediate value and then converting the intermediate value to a full-color representation using a programmatic function (**i.e., with the two colors and the screen directory full color space can be used to define the desired color. See Column 7, Lines 43-67, See Column 9, Lines 39-67, See Column 14, Lines 15-43 in reference Tagami'425).**

Regarding **Claim 6**, Herron'921 shows a method for converting input data representing a color formed from only two colors to output data representing a color formed from at least three colors (**i.e., a method for converting from a duotone/highlight-color to a full CMYK/color space value, use a full color printer to be able to print what a highlight printer would using at least four colors to represent the two-color original data. See Paragraphs 7-13**), comprising the steps of: receiving the two-color input data in the form of two colors, a primary color and a secondary color (**i.e., two colors a primary and secondary color are given in duotone color input ((duotone refers to two colors, a color and black)). See Paragraphs 2 and 7-13**); determining, for each color of the two-color input data, an equivalent color defined in a full color space by applying a first function to each color of the two-color input data (**i.e., mapping/function duotone colors to CMYK/full-color values in color space. See Paragraphs 7-13 and 20-23**).

Herron'921 fails to specifically show a method comprising determining, from the two-color input data, a screen characteristic for the primary color and the secondary color; determining which screen characteristic is of a lesser value, and then determining if the lesser value is equal to zero; if the lesser value screen characteristic is zero, generating an intermediate output that is a function of only one of the primary and secondary colors, otherwise, generating an intermediate output that is a function of both the primary and secondary colors, wherein the intermediate outputs include a highlight color, a highlight color percentage and a black percentage; and processing the

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intermediate output using a second function to generate the output data representing a single color defined in at least three color space.

Tagami'425 teaches a method comprising determining, from the two-color input data, a screen characteristic for the primary color and the secondary color (**i.e., a two color input data from like the ones needed in highlight printers ((duotone)) need a Ink source Language where the user defines his colors ((like for example the duotone colors)) and the output is define by the colors and screens/rendering-characteristic. See Column 1, Lines 16-35 and 39-55, See Column 3, Lines 15-27 and 55-66**); determining which screen characteristic is of a lesser value, and then determining if the lesser value is equal to zero (**i.e., the screen characteristics/values are determined by the user depending on the percentage values of the colors if they are the highest or lowest. See Column 5, Lines 3-23 and 33-42, See Column 6, Lines 54-67 and See Column 7, Lines 1-67 and See Column 8, Lines 36-67 and See Column 12, Lines 12-55**); if the lesser value screen characteristic is zero, generating an intermediate output that is a function of only one of the primary and secondary colors, otherwise, generating an intermediate output that is a function of both the primary and secondary colors, wherein the intermediate outputs include a highlight color, a highlight color percentage and a black percentage (**i.e., if the value of a percentage is zero the specification used for looking in the ink catalog specified to that percentage value will just be for one primary and other/secondary color colors since when no zeros are found it refers to the colors and highlight. See Column 7, Lines 1-67, Column 8, Lines 1-67 and See Column 9, Lines 1-67**); and

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processing the intermediate output using a second function to generate the output data representing a single color defined in at least three color space (**i.e., with the two colors and the screen directory full color space can be used to define the desired color. See Column 7, Lines 43-67, See Column 9, Lines 39-67, See Column 14, Lines 15-43).**

Having the system of Herron'921 and then given the well-established teaching of the Tagami'425, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the system as suggested by the combination of Herron'921 with the teachings of Tagami'425 by adding determining, from the two-color input data, a rendering characteristic for each of the primary color and the secondary color; based upon the rendering characteristics, and the primary and secondary colors, representing a combination of the primary and secondary colors, and the associated rendering characteristics, as an intermediate output; and processing the intermediate output using a second function to generate the output data representing a single color defined in the full color space, in order to make the system a more user friendly one where the user has the option of defining his colors and creating specific inks and let the user define, palettes, colors, patterns and screens.

Regarding **Claim 7**, the combination of Herron'921 and Tagami'425 shows a method wherein the step of generating an intermediate output that is a function of only one of the primary and secondary colors, comprises: determining if the primary color is black; and if the primary color is black, setting the highlight color to white, setting the highlight color percentage to 100% and setting the black percentage equal to the

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greater of the two screen characteristics, otherwise setting the highlight color to the primary color and setting the highlight color percentage equal to the greater of the two screen characteristics, and setting the black percentage to 0% **(i.e., if the value of a percentage is zero the specification used for looking in the ink catalog specified to that percentage value will just be for one primary and other/secondary color colors since when no zeros are found it refers to the colors and highlight; depending on the percentages values of the screen, the colors are known from ink catalogs. See Column 7, Lines 1-67, Column 8, Lines 1-67 and See Column 9, Lines 1-67 in reference Tagami'425).**

Regarding **Claim 8**, the combination of Herron'921 and Tagami'425 shows a method wherein the screen characteristics are percentage values associated with the screens for the respective colors **(i.e., screen set using percentage. See Column 7, Lines 1-50 in reference Tagami'425).**

Regarding **Claim 9**, the combination of Herron'921 and Tagami'425 shows a method wherein the step of generating an intermediate output that is a function of both the primary and secondary colors, comprises: determining if the primary color is black; and if the primary color is black, setting the highlight color to the secondary color and setting the highlight color percentage equal to the lesser of the two screen characteristics and setting the black percentage equal to the greater of the two screen characteristics, otherwise setting the highlight color to the primary color and the highlight color percentage equal to the greater of the two screen characteristics, and setting the black percentage equal to the lesser of the two screen characteristics **(i.e., if**

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the value of a percentage is zero the specification used for looking in the ink catalog specified to that percentage value will just be for one primary and other/secondary color colors since when no zeros are found it refers to the colors and highlight; depending on the percentages values of the screen, the colors are known from ink catalogs. See Column 7, Lines 1-67, Column 8, Lines 1-67 and See Column 9, Lines 1-67 in reference Tagami'425).

Regarding **Claim 10**, the combination of Herron'921 and Tagami'425 shows a method 10 wherein the screen characteristics are percentage values associated with the screens for the respective colors . **(i.e., screen set using color percentages. See Column 7, Lines 1-50 in reference Tagami'425).**

Regarding **Claim 11**, the combination of Herron'921 and Tagami'425 shows a method wherein the screen characteristic is a percentage value **(i.e., screen set using color percentages values. See Column 7, Lines 1-50 in reference Tagami'425).**

Regarding **Claim 12**, the combination of Herron'921 and Tagami'425 shows a method wherein the step of receiving the two- color input data comprises locating the color data in an ink catalog and retrieving the data therefrom **(i.e., the color data is found in the ink catalog. See Column 3, Lines 19-33 and See Column 9, Lines 4-10).**

Regarding **Claim 13**, the combination of Herron'921 and Tagami'425 shows a method wherein the first function is user-defined **(i.e., the used defines the colors to be used on the catalogs where later the two input colors are going to be mapped. See Column 1, Lines 31-50).**

With regards to method **Claim 15**, the limitation of the claim 15 are corrected by limitation of claim 1 and 6 above. The steps of claim 15 read into the function step of claim 1 and 6.

Regarding **Claim 17**, the combination of Herron'921 and Tagami'425 shows a method wherein the schema includes a color catalog which itself includes a plurality of palettes (i.e., **an ink color catalogue that includes many palettes. See Column 3, Lines 15-21 and 45-54 on reference Tagami'425**).

Regarding **Claim 18**, the combination of Herron'921 and Tagami'425 shows a method wherein the palettes include colors defined in terms of a standard color model (i.e., **palettes define colors. See Column 4, Line 35-45 and 65-68 on reference Tagami'425**).

Regarding **Claim 19**, the combination of Herron'921 and Tagami'425 shows a method wherein the standard color model is sRGB (**See Column 4, Line 6-15 on reference Tagami'425**).

4. **Claims 14 and 16** are rejected under 35 U.S.C. 103(a) as being unpatentable over Herron (US Publication Number 2005/0157921 A1) in view of Tagami et al. (US Patent Number 5,237,425) and in further in view of Draaisma (US Publication Number 2003/0227638 A1).

Regarding **Claim 14**, The combination of Tagami'425 and Yoshida'586 fails to show the method wherein the output data representing a single color defined in at least three color spaces is represented in the nature of an extensible markup language schema.

Draaisma'638 teaches a method wherein the output data representing a single color defined in at least three color space is represented in the nature of an extensible markup language schema (**i.e., the printer uses the structural format/schema of extensible markup language/XML. See Paragraph 29).**

Having the system of Tagami'425 and Herron'921 and then given the well-established teaching of the Draaisma'638, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the system as suggested by the combination of Tagami'425 and Yoshida'586 with the teachings of Draaisma'638 by adding a method wherein the output data representing a single color defined in at least three color space is represented in the nature of an extensible markup language schema, in order to improve the variability of the system by helping not restricting the printer to just one format giving more format option for the image processing as suggested in Paragraph 29 of reference Draaisma'638

With regards to method **Claim 16**, the limitation of the claim 16 are corrected by limitation of claim 14 above. The steps of claim 16 read into the function step of claim 14.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to IRIANA CRUZ whose telephone number is (571)270-3246. The examiner can normally be reached on Monday-Friday 7:30am to 4:00pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, King Y. Poon can be reached on (571) 272-7440. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/King Y. Poon/
Supervisory Patent Examiner, Art Unit 2625

Iriana Cruz
Examiner
Art Unit 2625

December 22, 2008

/I. C./
Examiner, Art Unit 2625